Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

QC5- Inspect part completeness to step on W/O

0.00

110

Memo

0.00

Quality Control

Page 1

Insp.

Stamp

DQA:		Date	e:									DART
QA Closed:		Dat	0.		WORK ORDER NON	-C(ONFO	RMANCE / L		Mante Ondanie	ndata anki. T	AEROSPACE
QA Closed:		Dat	e:							Work Order u	poate only	
Work Orde	er:				DISPOSITION				AGAINST I	DEPARTMENT	/PROCESS	
					Rework	1		Skid-tube	Crosstube		Water Jet	Engineering
Part N	No.				Scrap	1		Machining	Small Fab	Pro	od. Eng. Coor.	Quality
					Use-as-is	1	Thern	noforming	Finishing		re/Packaging	Other
NCR N	No				Suspected Unapproved]		Large Fab	Composite		Supplier	
Root			1	Desc	ription of work order update	Ī	Initial	Ad	ction	Sign &		
Cause	Dat	e Ster	Qty		or non-conformance	Ch	ief Eng.	Desc	cription	Date	Verification	QC Inspector
Design												
Doc/Data],										
Equip/Tooling												
Handling/Pre	Pre]	
Material												
Operator	 											
Offset/Setup										·		
Process		:		İ								
Supplier												
Training												
Transport				į								
Unapproved .				<u> </u>		<u> </u>						<u> </u>
						FA	ULT CAT	regory				
Landii	ng Gear				General		1		ŗ	_	_	,
	Bendi	-	_	_	Bend	<u> </u>	1	rogram	-	Outside Din	<u> </u>	Pressure/Forced
		e Not Cond	entric	_	BOM/Route	<u></u>	Grain			Over/Under	 	Set-up
	Cracks				Broken/Damage/Defect		Hardwa		-	Part Incorre	_	Temperature/Cure
•	Crimp/Kink/Ripple/Wave				Burrs	<u> </u>	4	ion Incomplete/l	· · · +	Part Lost/M		Weld
	Cuffs				Contamination		4	ions Incomplete,	-	Part Moved		Wrong Stock Pulled
•	Crushing				Countersink		1	ned/off center	·	Positioned		
	Heat ⁻				Cut Too Short	\vdash	Mislabe		į	Power Loss,	/Surge	Other
	 1	ction Strip	in Tube	-	Drawing	<u></u>	Misread	d				
	⊢	/Chatter			Drill Holes	<u></u>	Off-set					
		ng Sequen			Finish		4	Calibration				
	l Wave	/Twist in T	ube		Fit/Function	1	Out of 9	Seauence				

140

QC8- Inspect parts - second check

Memo

0.00

140

Quality Control

Memo

0.00

Quality Control

INSPECT INSIDE BORE

DQA:			Date:										
						WORK ORDER NON	-CO	ONFO	RMANCE / L	JPDATE			
QA Closed:			Date:			,					ork Order up	date only]
Work Ord	er:					DISPOSITION				AGAINST D	EPARTMENT	/PROCESS	•
						Rework			Skid-tube	Crosstube	7	Water Jet	Engineering
Part !	۷o.					Scrap		l	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
•						Use-as-is		Thern	noforming	Finishing	Rec/Stor	e/Packaging	Other
NCR I	Vo.		<u> </u>			Suspected Unapproved		į	Large Fab	Composite		Supplier	
Root					Desci	ription of work order update		nitial	A	ction	Sign &		
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Desc	cription	Date	Verification	QC Inspector
Design		·		_									
Doc/Data													
Equip/Tooling	_												
Handling/Pre													,
Material													
Operators													
Offset/Setup													
Process	<u> </u>												
Supplier													
Training [4]	<u> </u>												
Transport Unapproved													
Unapproved							<u> </u>						
							FA	JLT CAT	EGORY		· ·		·
Landi		1				General		l 		_	- .	<u></u>	ד
	_	Bending			-	Bend			rogram	<u> </u>	Outside Dim		Pressure/Forced
2	2.09	Centre No	ot Concer	itric	-	BOM/Route		Grain		-	Over/Under	-	Set-up
	Cracks					Broken/Damage/Defect		Hardwa			Part Incorred	-	Temperature/Cure
	Crimp/Kink/Ripple/Wave					Burrs		,	on Incomplete/U	· · · -	Part Lost/Mi		Weld
*	Crushing					Countarial	$\overline{}$		ions Incomplete,		Part Moved	_	Wrong Stock Pulled
	Heat Treat					Countersink	_	_	ned/off center	ļ	Positioned W		7
	-			Tubo	-	Cut Too Short	\vdash	Mislabe		· <u>[</u>	Power Loss/	ourge	Other
	<u> </u>	Inspection Marks/Ch		rube	-	Drawing Drill Holes	\vdash	Misread	l				
		Turning Se			-	Finish		Off-set	Calibration		 		
		Wave/Tw		۵	-	Fit/Function	\vdash		equence				
	L	I vave/ I W	ist iii Tub		11	Little and	ı	Out of 3	equence				

11/517

Page 3

Friday, March (07, 2014 9:20	D:15 AM		114	4:) /						
Item ID: Revision ID:	D3391-025			Accept	*N900	040	100	ን* s	Stan	. 1 7	S1*
Item Name:	Aft Tube Asse	embly							Stop	*N	S2*
Start Date:	3/7/2014	Start Qty: 1.00	*1*		Cust Item 1	D:					
Required Date	3/14/2014	Req'd Qty: 1.00	*1*		Customer:						
Reference:								10	Stow		
Approvals:	Process Pla	ın:	Date:	Tooling:	D:	ate:			tun Start	~1 <i>V</i> 1	R1*
	QC:		Date:	SPC (Y/N):	D:	ate:			Stop	*N	R2*
Sequence ID/ Work Center I	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool#	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
*150 *150*		Skidtutes		0.00				De	14/04	/29	
Skidtubes		Memo		0.00					· /////	/	
Skidtubes		1-Drill (PII	LOT HOLE) aft cap holes	per Dwg D3391 using D	Г8803						
160				0.00					. /	/	
160		BENDING MACHINE	SKIDTUBES					De	14/04/	29	
CNC Bend 1		Memo	D D0004 VI : D	0.00							•
CNC Delta 100 Be	nder	Form as per	Dwg D3391 Using Ben	a Prog 3391025							
		÷			.e						
170		QC5- Inspect part comp	leteness to step on W/O	0.00	045 03 9-89	~					
170 QC Quality Control		Memo		0.00		F			14-	1-2	9
		1) - 4	1,275							/	/

DQA:		Date:									. · ·	
:					WORK ORDER NON	-CO	ONFO	RMANCE / UPDATE				AFROSPACE
QA Closed:		Date:						, , , , , , , , , , , , , , , , , , , ,	Wor	k Order up	date only	
Work Orde	er:				DISPOSITION			AGAINST	DEP	ARTMENT	/PROCESS	
Part N					Rework Scrap Use-as-is Suspected Unapproved			Skid-tube Crosstube Machining Small Fab noforming Finishing Large Fab Composite			Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality , Other
Root				Desc	ription of work order update	Ī	Initial	Action		Sign &		
Cause	Date	Step	Qty		or non-conformance	Ch	ief Eng	Description		Date	Verification	QC Inspector
Design Doc/Data Equip/Tooling Handling/Pre Material Operator Offset/Setup Process Supplier Training Transport Unapproved												
						FA	ULT CA1	regory		4-14		
Landi	Cracks Crimp/K Cuffs Crushing Heat Tre Inspection Marks/C	ink/Ripple ink/Ripple at on Strip in hatter Sequence	/Wave		General Bend BOM/Route Broken/Damage/Defect Burrs Contamination Countersink Cut Too Short Drawing Drill Holes Finish		Grain Hardwa Inspecti Instruct Misalig Mislabe Misread Off-set	ion Incomplete/Unqualified cions Incomplete/Unclear gned/off center cled	P P	Outside Dim Over/Under Part Incorrect Part Lost/Mi Part Moved Positioned Williams	tolerance et ssing /rong	Pressure/Forced Set-up Temperature/Cure Weld Wrong Stock Pulled Other
	Wave/Ti	vist in Tub	oe -		Fit/Function		Out of S	Sequence				

· Friday, March 07, 2014 9:20:15 AM

Item ID: Revision ID:	D3391-025			Accept	*N900	040	100)* s	Setup Sta	171	S1*
Item Name:	Aft Tube Ass	embly						:	Sto	^p *N	S2*
Start Date: Required Date: Reference:	3/7/2014 3/14/2014	Start Qty: 1.00 Req'd Qty: 1.00	*1* ; *1*	•	Cust Item I Customer:	D:					
Approvals:	Process Pl	an:	Date:	Tooling:	Da Da	ate:		R	Run Sta	^ \/	R1*
	QC:		Date:	SPC (Y/N):	Da	ate:	_		Sto	*N	R2*
Sequence ID/ Work Center II	D	Operation Description		Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
1 AO Skidtubes Skidtubes		2-Drill flo 3-Drill we Wearplate *****Do 4-Drill We previously 5-Open w 6-Open up	arplate holes as per Dw Jig . Not Open To Finished S earshoe holes as per DV drilled aft wearplate h earplate holes to 0.297"	809 as per Dwg D3391(Holes of B03391 using DT8878(Mid TSize***** WG D3391 using DT8939 loca	Tube) & DT8211.)4-1 Y	6-2	3/14	7-2	3	,

DQA:		Date:		-								NA PT
QA Closed:		Date:			WORK ORDER	NON-	CONFC	PRMANCE / U		Work Order u	odate only	AEROSPACE
Work Orde	er: .				DISPOSITION	N			AGAINST	DEPARTMENT	/PROCESS	
Part N					Rew So Use-a Suspected Unappro	erap as-is	Ther	Skid-tube Machining moforming Large Fab	Crosstube Small Fab Finishing Composite	Pro Rec/Sto	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root		,		Desc	ription of work order u	update	Initial	Ac	tion	Sign &		
Cause	Date	Step	Qty		or non-conformance		Chief Eng	Desc	ription	Date	Verification	QC Inspector
Design Doc/Data Equip/Tooling Handling/Pre Material Operator Offset/Setup Process Supplier Training Transport Unapproved	/Data p/Tooling dling/Pre erial rator et/Setup cess plier ning pproved								•			
опаррточео	1	<u> </u>		<u> </u>		1	FAULT CA	TEGORY				
Landi	ng Gear	V1 -			General							
Bending Centre Not Concentric Cracks Crimp/Kink/Ripple/Wave Cuffs Crushing Heat Treat Inspection Strip in Tube Marks/Chatter Turning Sequence					Bend BOM/Route Broken/Damage/Defe Burrs Contamination Countersink Cut Too Short Drawing Drill Holes Finish	ect	Grain Hardw Inspect Instruct Misali Mislab Misrea Off-se	tion Incomplete/U tions Incomplete/ gned/off center eled id	Unclear	Outside Dim Over/Under Part Incorre Part Lost/Mi Part Moved Positioned V Power Loss/	tolerance ct sssing	Pressure/Forced Set-up Temperature/Cure Weld Wrong Stock Pulled Other
	Wave/Tw	ist in Tuk	ne .		Fit/Function	[Out of	Sequence				

QC

Quality Control

114517

Page 5

Friday, March 07, 2014 9:20:15 AM Accept *N900040100* Setup Start Item ID: D3391-025 **Revision ID:** Stop **Item Name:** Aft Tube Assembly *1* **Start Date:** Start Oty: 1.00 **Cust Item ID:** 3/7/2014 Req'd Qty: 1.00 Required Date: 3/14/2014 **Customer:** Reference: Start Run **Tooling:** Date: Date: **Process Plan: Approvals:** Stop QC: Date: SPC (Y/N): Date: **Tool ID** Tool # Plan Accept Reject Reject Insp. **Operation** Set Up/ Sequence ID/ Qty Qty Number Stamp Code Description **Work Center ID Run Hours** QC5- Inspect part completeness to step on W/O 0.00 190 *190* QC Memo Quality Control 0.00 200 Chemical Conversion Coat per QSI005 4.1 1 14-7-8 *200* HandFinish 0.00Memo Hand Finishing QC7-Inspect Chemical Conversion Coat 0.00 210 *910*

0.00

Memo

DQA:		Date:								•		
					WORK ORDER NON	-CO	ONFO	RMANCE / L	JPDATE			
QA Closed:		Date:						-	\	Vork Order up	odate only	7
Work Orde	er:	÷			DISPOSITION				AGAINST D	DEPARTMENT	/PROCESS	
Part N					Rework Scrap Use-as-is Suspected Unapproved			Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
i veni		****			Juspected Onapproved	J		raige rab	composite		Supplier	
Root				Desci	ription of work order update		nitial	Ad	ction	Sign &		
Cause	Date	Step	Qty		or non-conformance	Ch	ief Eng	Desc	cription	Date	Verification	QC Inspector
Design Doc/Data Equip/Tooling Handling/Pre Material Operator Offset/Setup Process Supplier Training												
Transport												
Unapproved			<u> </u>	<u></u>		<u> </u>	UTCAT	5600%		<u> </u>		
Landin		·			· · · · · · · · · · · · · · · · · · ·	FAU	JLI CA	EGORY				
Landin	n g Gear Bendir	g			General Bend		Folio/P	rogram	. [Outside Dim	ensions [Pressure/Forced
	Centre	Not Conce	ntric		BOM/Route		Grain			Over/Under	tolerance	Set-up
. [Cracks				Broken/Damage/Defect		Hardwa	re		Part Incorred	it -	Temperature/Cure
. [Crimp/Kink/Ripple/Wave				Burrs		Inspecti	on Incomplete/L	Inqualified	Part Lost/Mi	ssing	Weld
	Cuffs				Contamination		Instruct	ions Incomplete/	'Unclear	Part Moved		Wrong Stock Pulled
· Crushing					Countersink		Misalig	ned/off center	ļ	Positioned V	ے Vrong	
Heat Treat					Cut Too Short		Mislabe	led		Power Loss/		Other
Inspection Strip in Tube					Drawing -		Misread	l	<u>.</u>	<u> </u>		
Marks/Chatter					Drill Holes		Off-set					
Ť	Turnin	g Sequence			Finish			Calibration				
	Wave/	Twist in Tul	oe		Fit/Function			equence			· · · · · · · · · · · · · · · · · · ·	

230

QC5- Inspect part completeness to step on W/O

0.00

14/08/cs

230 QC

Memo

5- Deburr

0.00

Quality Control

DQA:			Date:							•			NA PT
			_		•	WORK ORDER NON	-CC	ONFO	RMANCE / L				AEROSPACE
QA Closed:			Date:		,			,		W	ork Order up	date only	
Work Orde	er:					DISPOSITION				AGAINST DE	EPARTMENT,	PROCESS	•
						Rework			Skid-tube	Crosstube	7	Water Jet	Engineering
Part N	۱o		,			Scrap		1	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
						Use-as-is		Thern	noforming	Finishing	Rec/Stor	e/Packaging	Other
NCR N	No				_	Suspected Unapproved]		Large Fab	Composite]	Supplier	
Root					Descr	ription of work order update	Ti	nitial	Ad	ction	Sign &		
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Desc	cription	Date	Verification	QC Inspector
Design							•						
Doc/Data													
Equip/Tooling							l						
Handling/Pre													
Material .	· H												
Operator	tor												
Offset/Setup						•							
Process	\dashv						*						
Supplier													
Training	\vdash						-					·	
Transport	H							,					
Unapproved				L			EAL	UT CAT	EGORY			· · · · · · · · · · · · · · · · · · ·	<u> </u>
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Canan		ending				Bend	<u> </u>	ا دمانه ۱۵	rogram		Outside Dime	onsions [Pressure/Forced
	_	_	t Concer	ntric		BOM/Route	H	Grain	TOBIAIII		Over/Under		Set-up
	Centre Not Concentric Cracks					Broken/Damage/Defect		Hardwa	re	-	Part Incorrec	-	Temperature/Cure
	Cracks Crimp/Kink/Ripple/Wave					Burrs	Н	ł	on Incomplete/U	Inqualified	Part Lost/Mis	}	Weld
	Cuffs					Contamination		1	ions Incomplete	· · · · · · · · · · · · · · · · · · ·	Part Moved	-	Wrong Stock Pulled
	Crushing					Countersink	Н	1	ned/off center		Positioned W	L ∕rong] WYONG Stock Talled
	Heat Treat					Cut Too Short	H	Mislabe	•		Power Loss/S		Other
	Inspection Strip in Tube					Drawing	-	Misread		<u> </u>	_	U	·
	Marks/Chatter					Drill Holes	\vdash	Off-set					<u> </u>
,	Т	urning Se	equence			Finish	П	1	Calibration				
	V	/ave/Twi	ist in Tub	e		Fit/Function		Out of S	equence				

250

Quality Control

OC

114517

Page 7

Insp.

Stamp

Friday, March 07, 2014 9:20:15 AM Accept *N900040100* Start Item ID: D3391-025 Setup **Revision ID:** Stop **Item Name:** Aft Tube Assembly *1* Start Qty: 1.00 **Cust Item ID:** 3/7/2014 **Start Date: Required Date: 3/14/2014 Reg'd Oty:** 1.00 *1* **Customer:** Reference: Run Start **Tooling: Process Plan:** Date: **Approvals:** Date: Stop SPC (Y/N): Date: *NR2* QC: Date: Reject Reject **Tool ID** Tool # Plan Accept Sequence ID/ Operation Set Up/ Number Qty **Work Center ID** Description Code **Qty Run Hours** 0.00 235 Pressure Wash per QSI005 4.3 *225* HandFinish 0.00 Memo Hand Finishing AND REALODINE AS PER PAR09-043 White Gloss(Ref:4.3.5.1) per QS 0.00 240 *240* 0.00 Powdercoat Powder Coating FINISH TIME; 3 250 QC3- Inspect Part Finish 0.00

0.00

Memo

DQA:			Date:										NA DT
						WORK ORDER NON-	-CC	ONFO	RMANCE / L	JPDATE			A E R O S P A C E
QA Closed:			Date:							V	ork Order up	date only	
Work Orde	er:					DISPOSITION				AGAINST D	EPARTMENT,	/PROCESS	
						Rework			Skid-tube	Crosstube	7	Water Jet	Engineering
Part N	۷o					Scrap		. 1	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
						Use-as-is		Thern	noforming	Finishing	Rec/Stor	e/Packaging	Other
NCR N	No					Suspected Unapproved			Large Fab	Composite		Supplier	
Root					Desci	ription of work order update	[nitial	Ad	ction	Sign &		
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Desc	cription	Date	Verification	QC Inspector
Design													
Doc/Data													
Equip/Tooling												•	
Handling/Pre													
Material													
Operator	ator												
Offset/Setup	 												
Process				*								•	
Supplier													
Training													
Transport													
Unapproved										**** * *** *** ***			
							FA	JLT CAT	TEGORY				
Landii 1						General		l		_	¬		-
		ending			-	Bend			rogram		Outside Dim) —	Pressure/Forced
e. E			t Concer	ntric	<u> </u>	BOM/Route	<u> </u>	Grain		_	Over/Under	_	Set-up
į.	Cracks				\vdash	Broken/Damage/Defect	_	Hardwa			Part Incorred		Temperature/Cure
	Crimp/Kink/Ripple/Wave					Burrs	-		ion Incomplete/U	· -	Part Lost/Mi	ssing	Weld
	Cuffs				\vdash	Contamination			ions Incomplete		Part Moved		Wrong Stock Pulled
Crushing Heat Treat				\vdash	Countersink	<u> </u>		ned/off center	<u> </u>	Positioned V	_	٦٥	
Inspection Strip in Tube				\vdash	Cut Too Short	\vdash	Mislabe		Ĺ	Power Loss/	Surge	Other	
Marks/Chatter				\vdash	Drawing Drill Holos	<u> </u>	Misread	1					
	Turning Sequence					Drill Holes	\vdash	Off-set	Salikanski e e				
		-				Finish	-		Calibration				
		vave/ (W	ist in Tub	JE		Fit/Function	L	Out of S	Sequence				

H:/FORMS/Quality Assurance\approved QA/NCRWO RevH

Work Ord Friday, March (*112	1517*				Page 8
Item ID: Revision ID:	D3391-025			Accept	*N90004010	10 *	Setup		*NS1*
Item Name:	Aft Tube Asse	embly						Stop	*NS2*
Start Date: Required Date: Reference:	3/7/2014 : 3/14/2014	Start Qty: 1.00 Req'd Qty: 1.00	*1* *1*		Cust Item ID: Customer:				
Approvals:	Process Pla	nn:	Date:	Tooling:	Date:	_	Run	Start	*NR1*
	QC:		Date:	SPC (Y/N):	Date:			Stop	*NR2*
Sequence ID/ Work Center I	D	Operation Description		Set Up/ Run Hours	Tool ID Tool # Plan Code		t Re Qt		Reject Insp. Number Stamp
²⁶⁰ *260*		HandFinishing		0.00		14		II	W 60/7-7
HandFinish Hand Finishing		2-Install Aft A/ R Sikafl Sikafle	erts as per Dwg D3391 Cap as per Dwg D3391 ex-241/-291_x/\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \				- †		
270		QC5- Inspect part compl	eteness to step on W/O	0.00					DAS
970 QC Quality Control		. Memo		0.00	•			· ·	

0.00

Identify as per dwg & Stock Location: wlo

Memo

280

280 Packaging

Packaging

0.00 D412-742-043/B115444 14 4 All 14/06/22

DQA:		Da	ate: _				_							*4	DART
QA Closed:		D	ate:			WORK ORDER NON-	-CC	ONFO	RMANCE / L		141				AEROSPACE
QA Closed:			ate.								W	ork Order up	date only		
Work Orde	er:					DISPOSITION				AGAINST	DE	PARTMENT	/PROCESS		
Part N					<u> </u>	Rework Scrap Use-as-is Suspected Unapproved		Thern	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite			Water Jet d. Eng. Coor. re/Packaging Supplier		Engineering Quality Other
												İ		<u>, </u>	
Root		ľ			Descr	ription of work order update	١	nitial	A	ction		Sign &			
Cause	Da	e St	ер	Qty		or non-conformance	Ch	ief Eng	Des	cription		Date	Verificatio	n	QC Inspector
Design															
Doc/Data		1		:											
Equip/Tooling															
Handling/Pre															
Material															
Operator	rator						l								
Offset/Setup															
Process															
Supplier															
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Transport							ŀ								
Unapproved															
		-					FAL	JLT CAT	EGORY						
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	Bend	ng				Bend	П	Folio/P	rogram			Outside Dim	ensions		Pressure/Forced
	Centr	e Not Co	ncent	tric		BOM/Route	П	Grain				Over/Under	tolerance		Set-up
	Crack	s				Broken/Damage/Defect		Hardwa	re			Part Incorred	:t	_	Temperature/Cure
	Crimp/Kink/Ripple/Wave			i \square	Burrs		Inspecti	on Incomplete/l	Ungualified		Part Lost/Mi	ssing	$\overline{}$	Weld	
Cuffs				Contamination		Instruct	ions Incomplete	/Unclear	-	Part Moved	•	П	Wrong Stock Pulled		
Crushing				, \	Countersink	-		ned/off center			Positioned W	/rong		·	
Heat Treat				Cut Too Short	-	Mislabe	•			Power Loss/S	_		Other		
Inspection Strip in Tube				Drawing	\vdash	Misread		•			Ŭ				
Marks/Chatter 🕠					Drill Holes	\vdash	Off-set								
ļ	Marks/Chatter // Turning Sequence					Finish	-		Calibration						
		/Twist in		2		Fit/Function	-		equence						

Work Order ID 114517

Quality Control

114517

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Friday, March 07, 2014 9:20:16 AM Accept Item ID: D3391-025 *N900040100* Setup Start **Revision ID:** Stop **Item Name:** Aft Tube Assembly *1* **Start Date: Start Oty:** 1.00 3/7/2014 **Cust Item ID: Required Date: 3/14/2014** Req'd Qty: 1.00 **Customer:** Reference: Start Run Process Plan: Approvals: Date:_ **Tooling:** Date: Stop QC: Date: SPC (Y/N): Date: Sequence ID/ Operation Set Up/ Tool ID Tool # Plan Accept Reject Reject **Work Center ID** Description **Run Hours** Qty Qty Number Stamp Code 290 QC21- Final Inspection - Work Order Release 0.00

0.00

Memo

MLJ 14-09-26 MK 149-25.

Insp.

DQA:			Date:			_							
			-			WORK ORDER NON	-C(ONFO	RMANCE / U	JPDATE			
QA Closed:			Date:	•••						V	Vork Order up	date only	AENOO! AGE
Work Ord	er:					DISPOSITION				AGAINST D	EPARTMENT	/PROCESS	
Part						Rework Scrap Use-as-is Suspected Unapproved			Skid-tube Machining moforming Large Fab	Crosstube Small Fab Finishing Composite		Water Jet d. Eng. Coor. e/Packaging Supplier	Engineering Quality Other
Root		<u> </u>			Desc	ription of work order update		Initial	Δα	ction	Sign &		· · · · · · · · · · · · · · · · · · ·
Cause		Date	Step	Qty	Desc	or non-conformance	l	nief Eng		cription	Date	Verification	n QC Inspector
Design Doc/Data Equip/Tooling Handling/Pre Material Operator Offset/Setup Process Supplier Training Transport Unapproved	oc/Data quip/Tooling andling/Pre laterial perator ffset/Setup rocess upplier raining ransport												
							FA	ULT CAT	TEGORY				
Landi	ng (Bending Centre No Cracks Crimp/Kin				General Bend , BOM/Route Broken/Damage/Defect Burrs Contamination		Grain Hardwa Inspecti	Program ore ion Incomplete/U cions Incomplete/	· -	Outside Dim Over/Under Part Incorred Part Lost/Mi Part Moved	tolerance t	Pressure/Forced Set-up Temperature/Cure Weld Wrong Stock Pulled
: :	<u> </u>	Crushing Heat Trea Inspectio	at	Tube		Countersink Cut Too Short Drawing		4	gned/off center eled	-	Positioned W Power Loss/	· · · · · · · · · · · · · · · · · · ·	Other
	<u> </u>	Marks/Ch			-	Drill Holes	\vdash	Off-set					
		Turning S				Finish		1	Calibration		· ·		
		Wave/Tw	ist in Tub	e		Fit/Function		Out of S	Sequence				

Friday, March 07, 2014 9:20:20 AM

Work Order ID: 114517

114517

Parent Item:

D3391-025

D3391-025

Parent Item Name: Aft Tube Assembly

Start Date: 3/7/2014

Required Date: 3/14/2014

Start Qty: 1.00

Required Qty: 1.00

D3670-4-200

Manufactured

No

230

Each 337.0000

D3670-4-200

Location	Lo	c Oty
FG		10
87709		10
LG001		327
103880		60
(109108	>	242
96240		25
	270	Each

Loc Code

61.0000

D2646

Manufactured

**

Aft Cap

Location	Loc Qty	Loc Code	
FG	4	2110151	- <u> </u>
85848	2	13118656	
90495	2		
FP001	57		
103306	18		
107857	1		
110816	. 38		

DQA:			Date:										NA PT
						WORK ORDER NON-	-CC	ONFO	RMANCE / L				_ AEROSPACE
QA Closed:			Date:							V	Vork Order u	odate only	•
Work Orde	er:					DISPOSITION		•		AGAINST D	EPARTMENT	/PROCESS	:
						Rework			Skid-tube	Crosstube		Water Jet	Engineering
Part N	۱o					Scrap		1	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
						Use-as-is		Thern	noforming	Finishing	Rec/Sto	re/Packaging	Other
NCR N	No			 -		Suspected Unapproved			Large Fab	Composite		Supplier	
Root					Descr	ription of work order update	i	nitial	Ad	ction	Sign &		
Cause	D	ate	Step	Qty		or non-conformance	Ch	ief,Eng	Desc	cription	Date	Verification	QC Inspector
Design													
Doc/Data													
Equip/Tooling													
Handling/Pre							l					1	
Material													
Operator	_												
Offset/Setup													
Process													
Supplier													
Training	_					,							
Transport													
Unapproved	ŲL.												
							FAI	ULT CAT	FEGORY				
Landii	ng Gear					General		1		_	_	_	
	_	nding			<u> </u>	Bend		1	rogram		Outside Dim	<u> </u>	Pressure/Forced
			t Concer	ntric		BOM/Route	Щ	Grain		<u> </u>	Over/Under	├	Set-up
	Cra					Broken/Damage/Defect		Hardwa		_	Part Incorre	<u> </u>	Temperature/Cure
	_	-	k/Ripple,	/Wave	-	Burrs		1 `	on Incomplete/U	· · · -	Part Lost/M	· · ·	Weld
	Cuf					Contamination	_	1	ions Incomplete	—	Part Moved	_	Wrong Stock Pulled
·	_	shing			-	Countersink	-	1 -	ned/off center	L	Positioned V		
1		at Treat				Cut Too Short	\vdash	Mislabe		L	Power Loss/	Surge	Other
			Strip in	Tube		Drawing	-	Misread	i				
	_	rks/Ch				Drill Holes	$\overline{}$	Off-set			· · · · · · · · · · · · · · · · · · ·		
i		_	equence			Finish		ł	Calibration		·	103	
	Wa	ve/Twi	st in Tub	e		Fit/Function		Out of S	Sequence			· · ·	

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Picklist Print								Page 3
Friday, March 07, 2014 9:20:20 AM		•						1 ugo 3
Work Order ID: 114517		*114	517*					
Parent Item: D3391-025			391-025*					
Parent Item Name: Aft Tube Assembl	y		191-07:1			Start Date: 3	3/7/2014	Required Date: 3/14/2014
	,					Start Qty: 1		Required Qty: 1.00
D3672-1	Manufactured	No		270	Each	1,676.000 2	2	required Qty. 1.00
D3672-1	Manufactureu	7.0		270	Lacii	**	<u></u> <u></u>	Moglzz
Phenolic Washer		_		_	_			
			cation	<u>Lo</u>	c Oty	Loc Code		
		FG			10			
		CT	85222 060		10			
		51	103845		1666 4			
			112218		500			
			113581		500			
			93886		450			
ALCA 1020 120 AFLSA 1020 12	2 72 4	N T	99099	260	212	1.126.000		
*AI \$4-1032-130 AEL\$4-1032-13		No		260	Each	1,136.000 14	14 01	1 1 2 - (-
Rivnut						****		(MOG/22
		Lo	cation	<u>Lo</u>	c Oty	Loc Code		
		ST	279		1079			
		,	M128179		122			
			M128211		957	11128649	<u> </u>	,
		st5			57			
ALS4-1032-225 AELS8-1032-22	5 D 1 1	Na	M126109	270	57	002.0000		
		No		270	Each	992.0000 8	8	10 1 1
AI S4-1032-225	5					**		U Moglz7
ALS7-1032-225		Lo	cation	Lo	c Oty	Loc Code		
•		FG			30			
			M127028		30	11128649	v 8	
		ST	280		928	, , ,		
			M127028		10			
			M128179		918			
		st5			34			
			M127092		34			
Friday, March 07, 2014 9:20:20 AM			Shop Pac	ket Print	,,,,,,			Page 3

DQA:			Date:										•	NA DT
						WORK ORDER NON	-C(ONFO	RMANCE / L	JPDATE				A FROSPACE
QA Closed:			Date:							W	ork Order up	date only		•
Work Orde	er: _					DISPOSITION				AGAINST DI	EPARTMENT	/PROCESS		
Part N	- ا ا					Rework Scrap			Skid-tube Machining	Crosstube Small Fab	-	Water Jet d. Eng. Coor.		Engineering Quality
NCR N	No					Use-as-is Suspected Unapproved		Thern	noforming Large Fab	Finishing Composite	Rec/Stor	e/Packaging Supplier	,	Other
Root					Desci	ription of work order update	1	Initial	A	ction	Sign &			
Cause	\perp	Date	Step	Qty		or non-conformance	Ch	nief Eng	Des	cription	Date	Verification	n	QC Inspector
Design Doc/Data Equip/Tooling Handling/Pre Material Operator			•											
Offset/Setup Process Supplier Training Transport														
Unapproved						•								
							FA	ULT CA1	EGORY					
Landi						General					-			
	\square	Bending Centre No Cracks	ot Concer	ntric		Bend BOM/Route Broken/Damage/Defect		Folio/P Grain Hardwa	rogram	-	Outside Dime Over/Under Part Incorrec	tolerance		Pressure/Forced Set-up Temperature/Cure
	\Box	Crimp/Kir	nk/Ripple,	/Wave		Burrs		1	on Incomplete/U	Jngualified	Part Lost/Mi	,		Weld
		Cuffs				Contamination		1 .	ions Incomplete,	· · —	Part Moved	_		Wrong Stock Pulled
		Crushing				Countersink	-	1	ned/off center		Positioned W	•		
		Heat Trea	t			Cut Too Short	_	Mislabe	•		Power Loss/S			Other
		nspection	n Strip in	Tube		Drawing		Misreac	i	, 				
		Marks/Ch	atter			Drill Holes		Off-set						
		Turning S	equence			Finish		Out of C	Calibration					
	<u></u>	Wave/Tw	ist in Tub	e		Fit/Function		Out of S	Sequence					

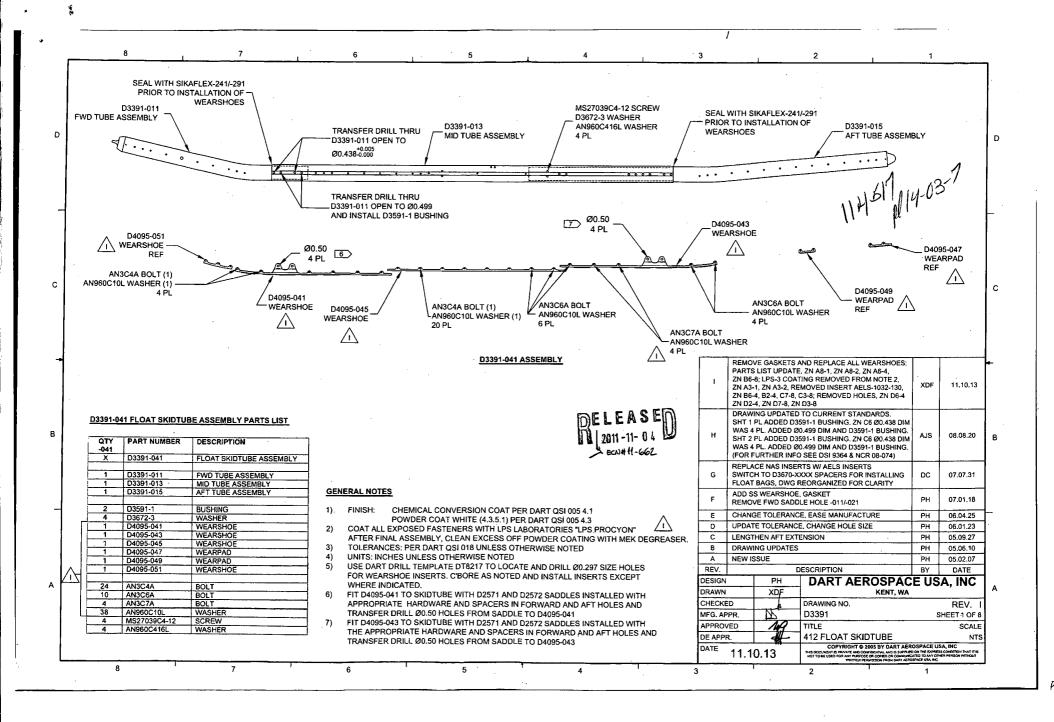
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Work Order ID: 114517		*1	145	1 7*							
Parent Item: D3391-025				., 1-025*	•						
Parent Item Name: Aft Tube Assen	nbly	*1.	,,,,, <u>,</u> ,	1-0/5			5	Start Date: 3	3/7/2014	Rea	ired Date: 3/14/2014
	•							Start Qty: 1			uired Qty: 1.00
AN3C4A	Purchased	No			270	Each	2,081.00		6	-	
AN3C4A	- 5							**		ll	14/09/22
			Location	<u>on</u>		Loc Qty	Loc Code				
			FG	122814		20 20	M1295	10		<u> </u>	
· ·			ST512			3					
		•	CDC 4.0	124221		3			_		
			ST513	125388	٠	2058 1835					
				M127410		1		•			
				M127832		222					
AN3C5A	Purchased	No			270	Each	1,089.00		4	. f. A	1
AN3C5A								**		<u> </u>	M 09/27
Bolt			Locatio	on .		Loc Qty	Loc Code				
			FG	-	•	5					
				122800		5	11/12991	3	Vd	<u> </u>	
			ST350			1084					
NAS1149C0332R	D 1 1	N.		M128057	270	1084	7 (72 00	0 10			
	Purchased	No			270	Each	7,672.00		10	III	1
NAS1149C033	⊅H							**		<u> </u>	W 08/2-
			Locatio	<u>on</u>]	Loc Oty	Loc Code				
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				125654		1101					
			st510	10/010		6571					
				m126319 m127306		61 2500					
				m127410		3000			X).	$\overline{\bigcirc}$	
				m127831		1010					
Friday, March 07, 2014 9:20:21 A.	M			Shop Pa	cket Prin	nt					Page 4

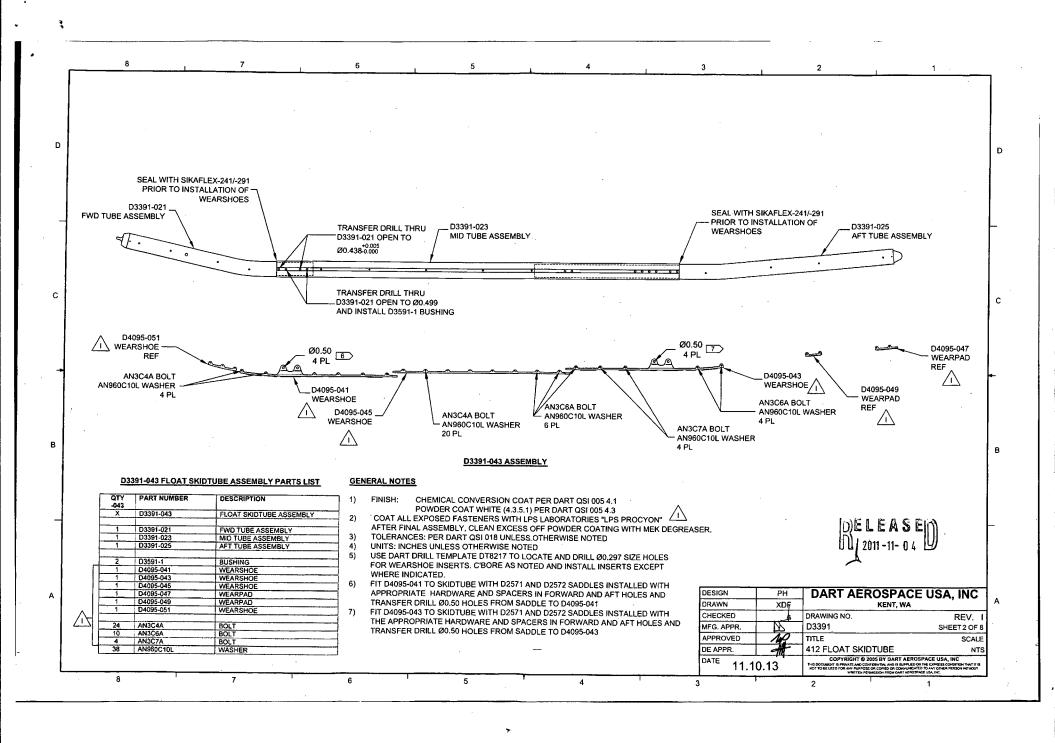
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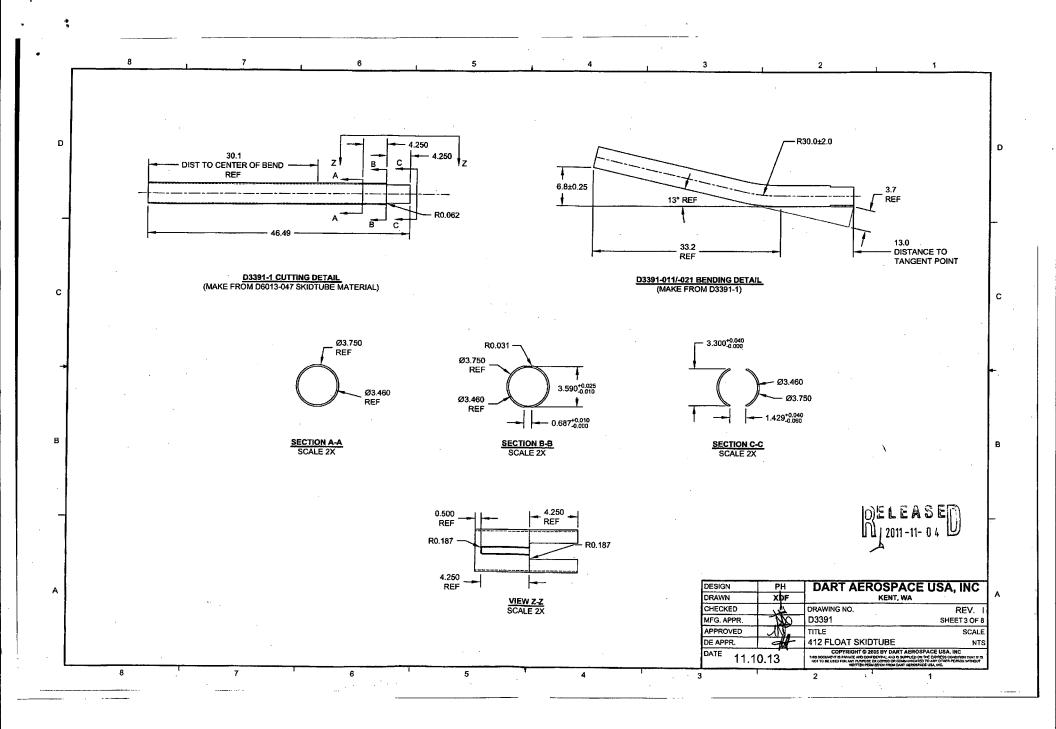
Page 4

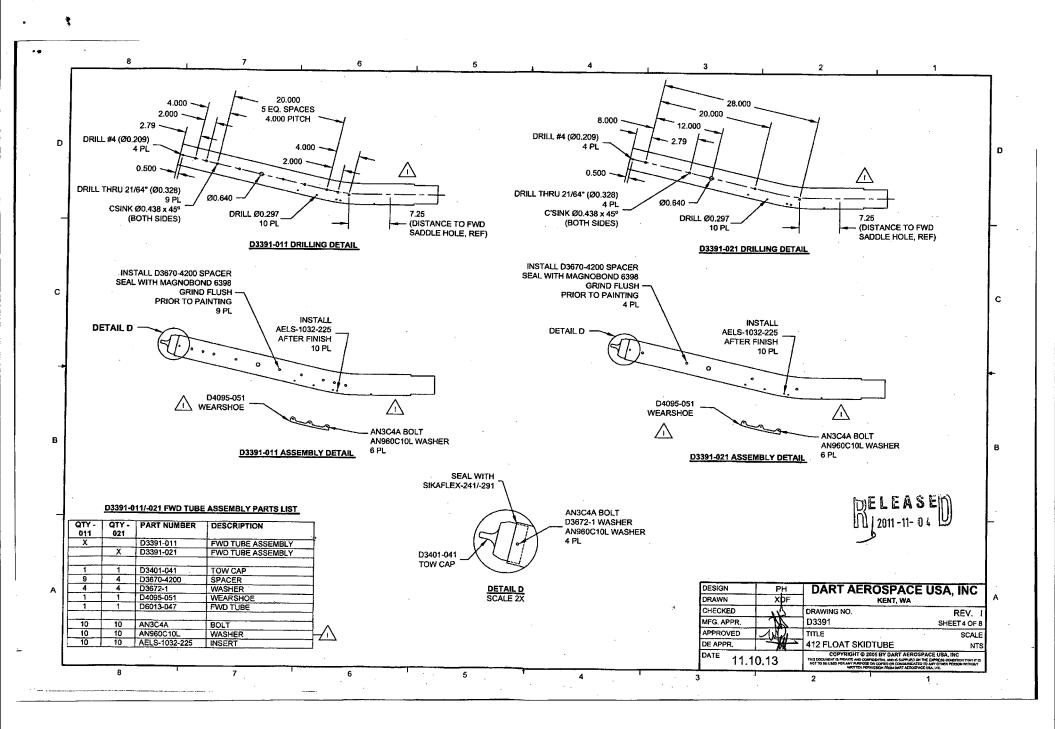
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QA Closed.			Date.								Vork Order u	date only	•
Work Orde	er:					DISPOSITION				AGAINST D	EPARTMENT	/PROCESS	
		,				Rework			Skid-tube	Crosstube	7	Water Jet	Engineering
Part N	lo.					Scrap		!	Machining	Small Fab	Pro	d. Eng. Coor.	Quality
						Use-as-is			noforming	Finishing		re/Packaging	Other
NCR N	١o.				į	Suspected Unapproved			Large Fab	Composite		Supplier	1
	-						•			· L			
Root					Descr	iption of work order update	1	nitial	A	ction	Sign &		
Cause		Date	Step	Qty		or non-conformance	Ch	ief Eng	Des	cription	Date	Verification	QC Inspector
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	_	nding				Bend		Folio/P	rogram	Ĺ	Outside Dim	ensions	Pressure/Forced
			t Concer	ntric		BOM/Route		Grain			Over/Under	tolerance	Set-up
	Cr	acks				Broken/Damage/Defect	Ш	Hardwa	re	L	Part Incorre	ct	Temperature/Cure
	Cr	imp/Kin	k/Ripple	/Wave		Burrs	$ldsymbol{ld}}}}}}$	Inspecti	on Incomplete/l	Unqualified	Part Lost/Mi	ssing	Weld
	Cı	ıffs				Contamination	$\overline{}$		ions Incomplete,	—	Part Moved		Wrong Stock Pulled
	_ Cr	ushing				Countersink	\Box	Misalig	ned/off center	· [Positioned V	Vrong	
	H	eat Trea	t			Cut Too Short		Mislabe	led	Ĺ	Power Loss/	Surge	Other
	_		Strip in	Tube		Drawing		Misread	1 .				
	ЩМ	arks/Ch	atter			Drill Holes		Off-set					
	Tu	rning Se	equence			Finish		Out of 0	Calibration				 -
	w	ave/Tw	ist in Tub	e		Fit/Function		Out of S	equence				

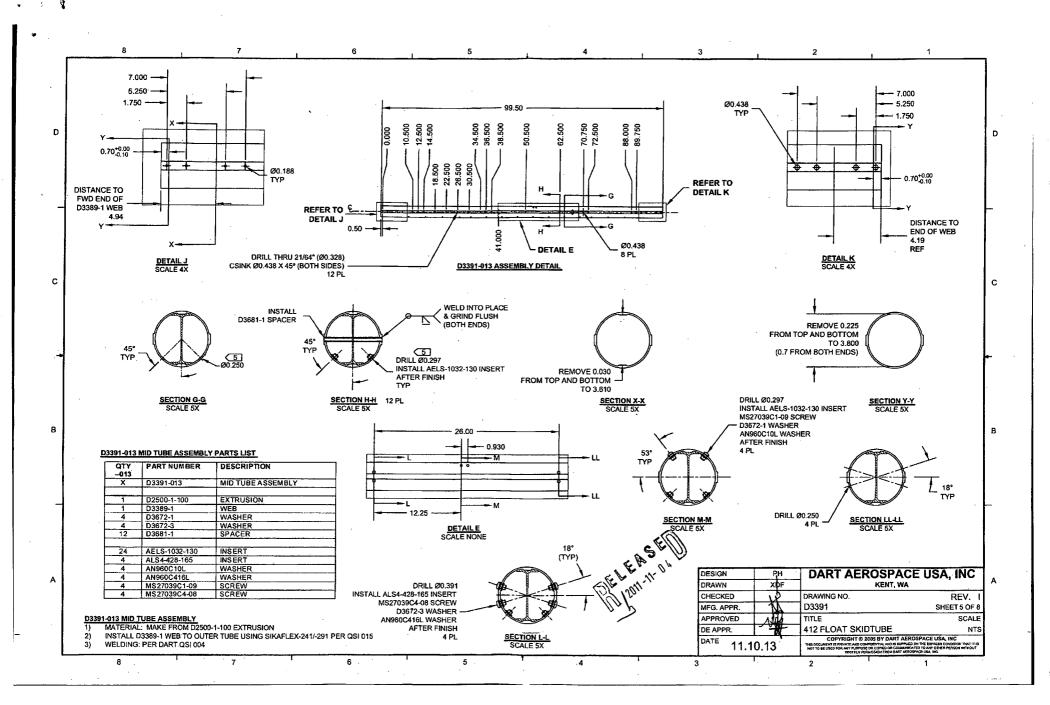
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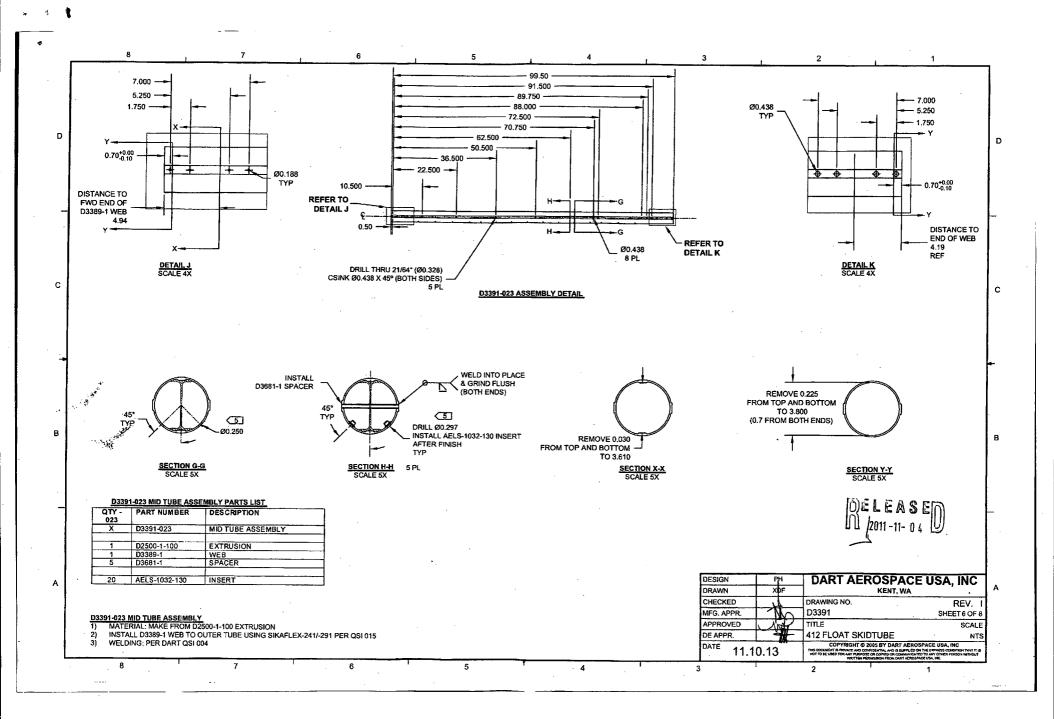


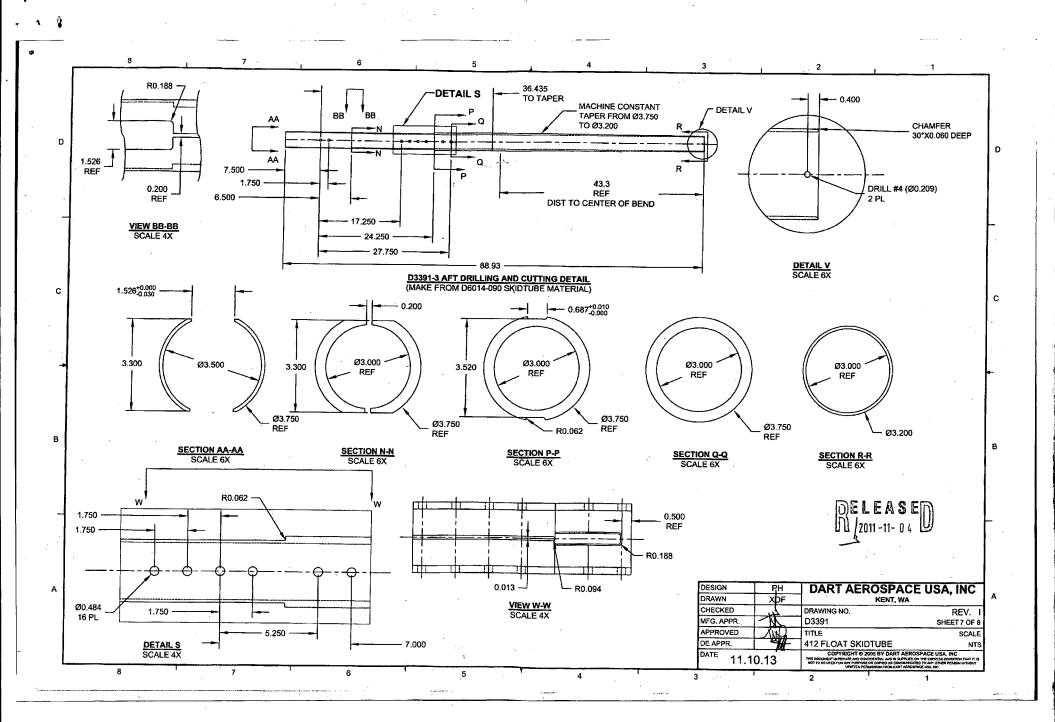


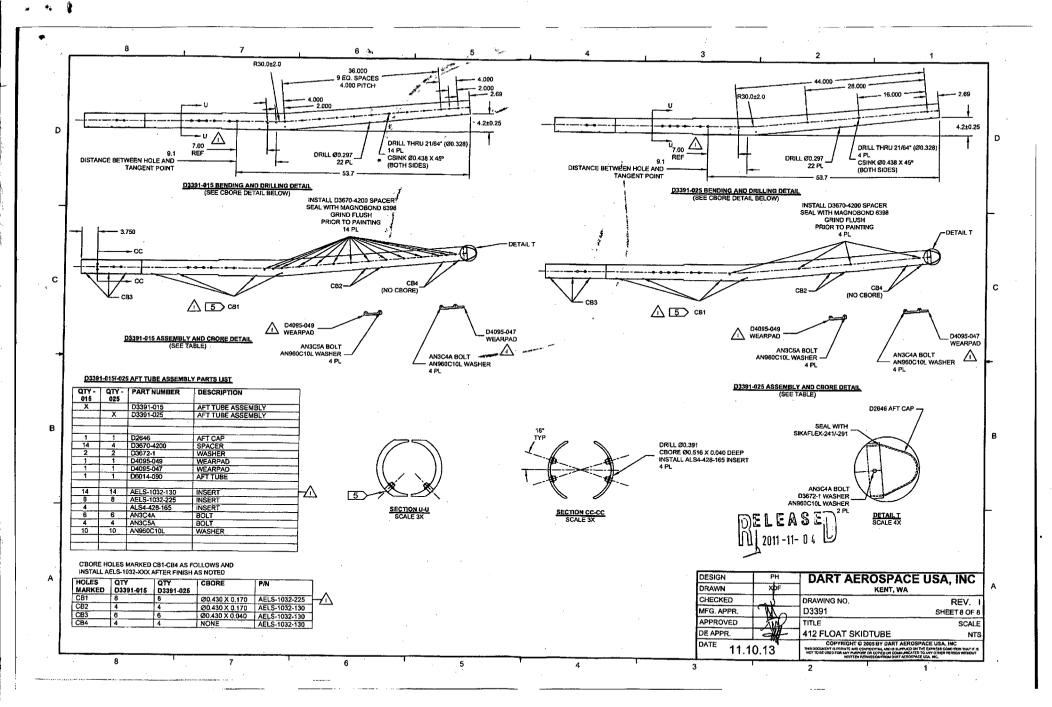












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DART AEROSPACE LTD	Work Order:	
		¥ *
Description: Float Skidtube (412)	Part Number:	D3391-3
Inspection Dwg: D3391 Rev: I		Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
		Lat	he Section	n		
14.000	+/-0.010	14.000			tape	16-25
3.500	+/-0.010	3,501	/		vern	CNC-08
Ø3.200	+/-0.010	3.203	_)	
Ø3.750	+/-0.010	3-750				
30° x 0.060 chamfer	+/-0.010	300 ×.060	/		J	,
88.93	+/-0.030	88.93			tape	LG-25

Measured by: 7777 1 Date: 14/03/08

Audited by: 5M Date: 14/1/12

		НА	AS Section	n		·
1.526	+0.000/-0.030	1.520			Vem	ML-106
7.500	+/-0.010	7.500	_		• 1	
27.750	+/-0.010	27.750			M-tage	176-08
31.750	+/-0.010	31.750			11	
35.250	+/-0.010	35,250			11.	
3.300	+/-0.010	3,305			Voin	ML-06
0.200	+/-0.010	-200			· · · · · · · · · · · · · · · · · · ·	
3.520	+/-0.010	3.577	_		1 (
0.687	+0.010/-0.000	.690			, ne	•
R0.062	+/-0.010	R-062	_		RL	
Ø0.484	+0.005/-0.001	8.485			Vem	11-06

Measured by: Date: 14/04/27

Audited by: Date: 14/04/27

Rev	Date	Change	Revised by	Approved
Α	06.04.24	New Issue P/O D3391-015/-025	KJ/JLM	
В	06.06.19	Dwg revision update	KJ/JLM	
С	07.04.20	Ø0.208 dimension removed	KJ/JLM	
D	07.09.06	0.400 dimension removed	KJ/JLM	
E	07.11.23	Dwg Rev. updated	KJ/EC/DD_	
F	09.04.27	Dimensions updated per Rev H and NCR09-028	KJ/JLM	
G	09.11.16	Dimension 0.200 removed	KJ	
. н	11.06.21	Dimension 44.995 removed	KJ	
ī	12.05.15	Dwg Rev updated	KJ	
J	12.05.23	Dimension updated	KJ	
K	12.10.15	88.93 dimension removed	KJ M	1
L	12.11.28	88.93 dimension added	KJ 😽	<u> </u>

DQA:		Date:										7				
	F3 50				WORK ORDER NON-CONFORMANCE / UPDATE								<i>لا</i> ك: * ^ 4	ROSPACE		
QA Closed:	Carlo	Date:		e/						W	ork Order up	date only	7.40	×6 ₇₂		
Work Order:					DISPOSITION			AGAINST DE			PARTMENT,	-				
Part N	lo		8			Rework Scrap Scrap	Ther	Skid-tub Machinir moformin	ng Small	. —		Water Jet d. Eng. Coor. e/Packaging	_	uality Other		
NCR N	lo				Suspected U		·	Large Fa	~ — ·		فر ر مرید در در	Supplier				
Root			ΔĮ ^t	Désc	ription of work	order update	Initial		Action	,	Sign &	1. w	,	*		
Cause	Date	Step	Qty		or non-confor	mance	Chief Eng	3	Description		Date	Verification	QC II	nspector		
Design Doc/Data Equip/Tooling			, t											,		
Handling/Pre			,		1		1,5% (3) (3)	1		7,3		*				
Material		13#T \$*			: -		# *			' .				••		
Operator	\dashv					i i				٠. ,	430		· . ^{(*}			
Offset/Setup Process Supplier							*** ***	-								
Training		4 24			,				- The T	6 a.	1	10 A 1 A 1	£.	. **		
Transport		1			A Section of the Sect	A STATE OF THE STA	7	7	70					mg.		
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	•	<u> </u>	- Paris	3.	* 13 7	-	FAULT CA	TEGORY	1 7400	1. 1	1 , '					
Landin	ng Géar		1.75		Gener	al 🧽 🤻 📑			The state of	<u> </u>	1	·	<u>.</u> }			
[ÿ]	Bending				Bend			Folio/Program			Outside Dim	. •		Pressure/Forced		
ľ þ	Centre Not Concentric				BOM/Route		Grain	The State of the S		The state of the s	Over/Under	5 T. V.	Set-up			
	Cracks							Hardware -			Part Incorre	*** The state of t		Temperature/Cure		
	Crimp/Kink/Ripple/Wave							inspection Incomplete/Unqualified			Part Lost/Mi Part Moved	ssing	المستحد	Weld Wrong Stock Pulled		
	Cuffs							Instructions Incomplete/Unclear				- T		ock Pulled		
	Crushing				Countersink							Vrong		laura est		
<u> </u> . -	Heat Tre		T., b -	\vdash	Cut Too Short			Mislabeled				Surge	Totner -	Other		
	Inspection Strip in Tube Marks/Chatter				Drawing			Misread				· · · · · · · · · · · · · · · · · · ·				
}	-				Drill Holes	****	Off-se	,			- 15 A A A A A A A A A A A A A A A A A A		F	-\		
	Turning Sequence Wave/Twist in Tube				Finish Fit/Function			Calibration Sequence		Mary July Mary	<u> </u>		4 5			

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